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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LE, LANA N

ART UNIT PAPER NUMBER

2618

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/789,599

Applicant(s)

SPELLMAN, MARK

Examiner

Lana N. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/27/04
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15, 18-29, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake (US 6,038,434) in view of Moers (US 6,957,053).

Regarding claim 1, Miyake discloses a radio receiver (fig. 3) comprising:

a first tuner (2) connected with an antenna (1) for generating a first audio signal and a second audio signal;

a controller (7) connected with the first tuner (2), where the first audio signal and the second audio signal are processed by the controller (7) to generate a first audio output signal (output signal from audio unit 14) and a second audio output signal (from speaker 5); a first audio power amplifier (4) connected with the controller (7) configured to receive the first audio output signal at speaker (5); an audio unit (14) connected with the controller (7) configured to receive the second audio output signal. Miyake does not disclose a second tuner connected with the antenna, and a digital signal processor connected to the tuners for processing the audio signals. Moers discloses a second tuner (2; fig. 1) connected with an antenna (1) and a digital signal processor (6) connected to the tuners (2, 3) for processing the audio signals. It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to have a second tuner in which the RDS decoder of Miyake can be associated with the second tuner of Moers in order to have a separate tuner to tune to the RDS data of Miyake to provide less interference with the regular non RDS audio signal and convert it into another audio signal. Miyake and Moers do not disclose a second PA. However, the examiner takes official notice that a second power amplifier can be connected to the audio unit (14) of Miyake to strengthen the audio signal.

Regarding claim 2, Miyake and Moers disclose the radio receiver of claim 1 wherein Moers disclose the receiver comprising a control unit (12) connected (via 4) with the first tuner (3) and (via 7) the second tuner (2).

Regarding claim 3, Miyake and Moers disclose the radio receiver of claim 2 where Moers discloses the control unit (12) is operable to generate a first tuner control output (via I/O 11) that is used to set the first tuner (3) to a first selected frequency (col 3, lines 45-48).

Regarding claim 4, Miyake and Moer disclose radio receiver of claim 3 where Moers disclose the control unit (12) is operable to generate a second tuner control output (via I/O control 11) that is used to set the second tuner (2) to a second selected frequency (col 3, lines 45-48).

Regarding claim 5, Miyake and Moer disclose the radio receiver of claim 1 where Moers discloses a signal quality output signal (16) is provided to a control unit (25) by the first tuner (3) (col 6, lines 42-50).

Regarding claim 6, Miyake and Moer disclose the radio receiver of claim 5

where Moers discloses the control unit (12) is operable to adjust the first tuner (3) to an alternate frequency setting if a first frequency setting falls below a predetermined threshold of signal quality (col 5, lines 48-53).

Regarding claim 7, Miyake and Moer disclose the radio receiver of claim 1 where a signal quality output signal (selected best quality tuned FM frequency) is provided to a control unit by the second tuner (2) (col 6, lines 36-37).

Regarding claim 8, Miyake and Moer disclose radio receiver of claim 7 where Moers discloses control unit is operable to adjust the second tuner (2) to an alternate frequency setting if a first frequency setting falls below a predetermined threshold of signal quality (selecting a clearer tuning frequency for receiving an RF FM transmitter within an RF FM frequency band) (col 3, line 64 - col 4, line 4).

Regarding claim 9, Miyake and Moer disclose radio receiver of claim 1 wherein Miyake discloses the receiver comprises a first radio data system decoder (6) connected with the first tuner (2) and a control unit (7).

Regarding claim 10, Miyake and Moer disclose radio receiver of claim 9 where the Miyake discloses first radio data system decoder (6) is configured to provide data to the control unit (7) that relates to the first tuner (2).

Regarding claim 11, Miyake and Moer disclose radio receiver of claim 10 where Miyake discloses the data is displayed on a display (13) connected with the control unit (7).

Regarding claim 12, Miyake and Moer disclose radio receiver of claim 9 where Moers discloses a second radio data system decoder (7) connected with the second

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tuner (2) and the control unit (12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a second decoder to decode RDS data of the second tuner if the first tuner also contain RDS data.

Regarding claim 13, Miyake and Moer disclose radio receiver of claim 12 where Moers discloses the second radio data system decoder (7) is configured to provide data to the control unit (12) that relates to the second tuner (2).

Regarding claim 14, Miyake and Moer disclose radio receiver of claim 13 where Miyake discloses the data is displayed on a display (13) connected with the control unit (7).

Regarding claim 15, Miyake and Moer disclose radio receiver of claim 1 where Miyake discloses the first audio power amplifier (4) is connected with at least one speaker (5).

Regarding claim 18, Miyake discloses a radio receiver (fig. 3) comprising:

- a control unit (7);

- a first tuner (2) connected with the control unit (7) capable of being tuned to a first frequency setting;

- a controller (7) connected with the first tuner (2) configured to generate a first audio output signal (at speaker 5) as a function of the first frequency setting of the first tuner (2) and a second audio output signal (at audio unit 14) as a function of the second frequency setting; a first audio power amplifier (4) connected with the controller (7) configured to receive the first audio output signal.

Miyake does not disclose a second tuner connected with the control unit capable of being tuned to a second frequency setting; a digital signal processor connected with the first tuner and the second tuner. Moers discloses a second tuner (2) connected with a control unit (12) capable of being tuned to a second frequency setting (col 4, lines 5-9); a digital signal processor (6) connected with the first tuner (3) and the second tuner (2) (see figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a second tuner in which the RDS decoder of Miyake can be associated with the second tuner of Moers and a DSP in order to have a separate tuner to tune to the RDS data of Miyake and convert it into another audio signal and to digitally process the tuned signal. Miyake and Moers do not disclose a second audio power amplifier connected with the digital signal processor configured to receive the second audio output signal. However, the examiner takes official notice that a second audio power amplifier can be connected to the controller of Miyake configured to receive the second audio output signal in order to strengthen of Miyake to strengthen the audio signal from audio unit (14).

Regarding claim 19, Miyake and Moer disclose the radio receiver of claim 18 where Moers discloses the control unit (12) is configured to tune the first and second tuner (3 and 2) to the first and second frequency settings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to tune the first and second tuner to the first and second frequency settings in order tune each tuner to a separate frequency setting so that the user has a broader range of choices in selecting audio programs.

Regarding claim 20, Miyake and Moer disclose the radio receiver of claim 18 Miyake discloses the receiver further comprising a radio data system decoder (6) connected with the first tuner (2) and the control unit (7).

Regarding claim 21, Miyake and Moer disclose the radio receiver of claim 20 where Moers discloses the radio data system decoder (4) is configured to provide the control unit with a list of alternative frequencies for the first frequency setting (col 5, lines 48-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have AFs to tune to another frequency which has better reception.

Regarding claim 22, Miyake and Moer disclose the radio receiver of claim 21 where Moers discloses the control unit (12) is configured to tune the first tuner (2) to an alternate frequency if a signal quality indication of the first tuner falls below a predetermined level of quality (col 5, lines 19-24, lines 48-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to tune to an AF having a better FM reception as is well known in an FM receiver.

Regarding claim 23, Miyake and Moer disclose radio receiver of claim 20 where Miyake discloses the radio data system decoder (6) is configured to provide data to the control unit (7) associated with the first frequency setting (see figure 3).

Regarding claim 24, Miyake and Moer disclose the radio receiver of claim 23 where Miyake discloses the data is displayed on a display (13) connected with the control unit (7).

Regarding claim 25, Miyake and Moer disclose the radio receiver of claim 18

wherein Moers discloses a radio data system decoder (4) connected with the second tuner (3) and the control unit (12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a second decoder to decode RDS data of the second tuner if the first tuner also contain RDS data.

Regarding claim 26, Miyake and Moer disclose radio receiver of claim 25 where Moers discloses the radio data system decoder (4) is configured to provide the control unit (12) with a list of alternative frequencies for the second frequency setting (col 5, lines 48-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have AFs to tune to another frequency which has better reception.

Regarding claim 27, Miyake and Moer disclose the radio receiver of claim 26 where Moers discloses the control unit (12) is configured to tune the second tuner (3) to an alternate frequency if a signal quality indication of the second tuner falls below a predetermined level of quality (col 5, lines 48-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to tune the second tuner to another frequency to obtain a better quality signal.

Regarding claim 28, Miyake and Moer disclose the radio receiver of claim 25 where Moers discloses the radio data system decoder (4) is configured to provide data (via 17) to the control unit (12) associated with the second frequency setting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to send RDS data of the second tuner when the first tuner also contain RDS data.

Regarding claim 29, Miyake and Moer disclose the radio receiver of claim 28

where Miyake discloses the data is displayed on a display (13) connected with the control unit (7).

Regarding claim 31, Miyake discloses a radio receiver comprising: means for tuning a first tuner (2) to a first frequency setting and second frequency setting; and means for generating a first audio output signal (via 5) as a function of a first radio signal received from the first frequency setting and a second audio output signal (at audio unit 14) as a function of a second radio signal received from the second frequency setting. Miyake does not disclose tuning a second tuner to a second frequency setting. Moers discloses tuning a second tuner (3) to a second frequency setting. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a second tuner in Miyake in order to tune the RDS data with a second tuner such as the one of Moers in order to separately tune the RDS data with another tuner to provide less interference with the regular non RDS audio signal.

Regarding claim 32, Miyake and Moer disclose the radio receiver of claim 31, where Miyake discloses the receiver further comprising means (4) for amplifying the first audio output signal to be played on at least one speaker (5).

Regarding claim 34, Miyake and Moer disclose the radio receiver of claim 31, wherein Moers discloses the receiver further comprising means (12) for retuning the first and second tuner if the first or second radio signal falls below a predetermined level of quality (col 5, lines 48-53; col 6, lines 36-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to retune to another frequency to allow the users to obtain a better reception.

3. Claims 16-17, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake (US 6,038,434) in view of Moers (US 6,957,053) and further in view of Huemann et al (US 5,661,811).

Regarding claim 16, Miyake and Moer disclose radio receiver of claim 1, where Miyake and Moers do not disclose the second audio power amplifier is connected with a headphone jack. Huemann et al disclose a second power amplifier (24) is connected with a headphone jack (38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a headphone jack connected to the power amplifier in order to allow back passenger to hear the audio signal without hearing the front passenger's audio output or vice versa.

Regarding claim 17, Miyake and Moer disclose radio receiver of claim 1 where Miyake and Moers do not disclose the first audio power amplifier is connected with a vehicle speaker system and the second audio power amplifier is connected with a headphone jack. Huemann et al disclose the first audio power amplifier (18) is connected with a vehicle speaker system (20) and the second audio power amplifier (38) is connected with a headphone jack (36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the speaker system of Miyake and Moers in a vehicle with a headphone jack in order to allow the tuned signal to be provided to passengers traveling in a car and allow the back passenger to hear the audio signal without hearing the front passenger's audio output or vice versa.

Regarding claim 30, Miyake and Moer disclose the radio receiver of claim 18 Miyake and Moers do not disclose the first audio power amplifier is connected with a

vehicle speaker system and the second audio power amplifier is connected with a headphone jack. Huemann et al disclose the first audio power amplifier (18) is connected with a vehicle speaker system (20) and the second audio power amplifier (38) is connected with a headphone jack (36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the speaker system of Miyake and Moers in a vehicle with a headphone jack in order to allow the tuned signal to be provided to passengers traveling in a car and allow the back passenger to hear the audio signal without hearing the front passenger's audio output or vice versa.

Regarding claim 33, Miyake and Moer disclose the radio receiver of claim 32. Miyake and Moers do not disclose comprising means for amplifying the second audio output signal for a headphone jack. Huemann et al disclose means (24) for amplifying the second audio output signal for a headphone jack (36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the means for amplifying for a headphone jack in order to strengthen the audio signal for the back passenger having a different audio output to a headphone jack.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N. Le whose telephone number is (571) 272-7891. The examiner can normally be reached on M-F 9:30-18:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (571) 272-7899. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lana Le

Lana N. Le
5-29-06
LANA LE
PRIMARY EXAMINER